

ABSTRACT OF THE DISCLOSURE

Tabs or stops are integrated into a membrane structure to prevent its snapdown.

5 Features comprising two surfaces separated by a distance equal to the maximum desired range of movement are produced. When the two surfaces contact, the motion of the structure is arrested or greatly diminished by increasing its rigidity. For an electrostatically actuated MEMS structure, these features can be used to limit the range of motion such that pull-in or snapdown is avoided, greatly enhancing the reliability of the device. One key design feature is that the two contacting surfaces are maintained at the same electrical potential avoiding 10 problems associated with electrostatic cavity discharge.